

Wind Power Profile of Rajasthan



State Profile

Located on the north-western side of [India](#), Rajasthan covers an area of 342,239 square kilometres and it comprises most of the wide and inhospitable Thar Desert (Rajasthan Desert or Great Indian Desert) and shares a border with the Pakistani provinces of Punjab to the northwest and [Sindh](#) to the west, along the Sutlej-Indus river valley. It is bordered by five Indian states: Punjab to the north; Haryana and Uttar Pradesh to the northeast; Madhya Pradesh to the southeast; and Gujarat to the southwest. State lies between 26.45°N Latitude & 73.30° E Longitude.

The geographic features of Rajasthan are the Thar Desert and the [Aravalli Range](#), which runs through the state from southwest to northeast, almost from one end to the other, for more than 850 kilometres. Mount Abu lies at the south-western end of the range, separated from the main ranges by the West Banas River, although a series of broken ridges continues into Haryana in the direction of Delhi where it can be seen as outcrops in the form of the [Raisina Hill](#) and the ridges farther north. About three-fifths of Rajasthan lies northwest of the Aravallis, leaving two-fifths on the east and south direction.



The Climate

of Rajasthan generally arid or semi-arid and features fairly hot temperatures over the year with extreme temperatures in both summer and winter.

Due to the desert Geography, temperatures frequently climb above 40 to 45⁰ Celsius in most places and the summer is the longest season. The cold weather commences early in October and comes to an end in the middle of January. The climate in the cold weather is pleasant to very cool and temperature goes down to 5-6⁰ C.

The state has two distinct periods of rainfall: rainfall due to the South-West Monsoon after summer and rainfall due to Western Disturbances. The average rainfall is 300mm.

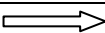
Grid-Connected Renewable Energy Projects (MW) (MNRE)

Sr. No.	Renewable Energy Source	Cumulative capacity as on 30.06.2019
1	Wind	4299.72
2	small-Hydro*	23.85
3	Bagasse based co-gen	119.30
4	Non Bagasse Captive	2.00
5	Waste to Energy	0
6	Industrial waste**	0
7	Solar	3552.80
	Total (MW)	7997.67

Installed Capacity (in MW) of Power Utilities In Maharashtra Including Allocated Shares In Joint & Central Sector Utilities (CEA)

SN	Source	Capacity in MW as on 30.06.2019
1	Coal	10018.25
2	Lignite	1580.00
3	Gas	824.90
4	Diesel	0.00
	Total	12423.15
5	Nuclear	556.74
6	Hydro	1939.19
7	Renewable	7993.87
	Total	22912.95

Wind Power Installable Potential as per Wind Atlas 2015 by NIWE

Wind Potential @100m Hub Height	Rank I	Rank II	Rank III	Total
Type of Land 	Waste Land	Cultivable Land	Forest Land	
Potential in MW	15415	3343	13	18771

Rank I	Waste Land	NRSC Level –II Classification Values	12, 13, 15, 19
Rank II	Cultivable Land	NRSC Level –II Classification Values	2, 3, 4, 5, 6, 10, 18
Rank III	Forest Land	NRSC Level –II Classification Values	7, 8, 9

Installable Potential assessed by NIWE earlier was 5005MW at 50m Hub Height and 5050MW at 80m Hub Height.

Wind Monitoring Stations Established in the State as on 31.03.2017: 49

Number of Stations having $WPD \geq 200 \text{ W/m}^2$: 8

The highest $WPD \geq$ of 276 W/m^2 is at Harshanth

Demonstration Wind power Projects Funded by the Government in the State as on 31.03.2017:

Number of Wind Turbines: 17

Capacity installed: 6.35MW

Wind Power Installed capacity as on 30th June 2019: 4299.72 MW

RPO Compliance Report of Rajasthan State for FY 2017-18 Page-1

Total Energy Consumed, (MU)	Solar RPO Obligation, (%)	Solar RPO Obligation, (MU)	Non Solar RPO Obligation, (%)	Non Solar RPO Obligation, (Mu)	Total Obligation, (%)	Total Obligation, (MU)
1	2	3	4	5	6	7
70598	4.75	3353.4	9.5	6706.8	14.25	10060.2

RPO Compliance Report for FY 2017-18 -Continued

Actual Compliance Of Solar RPO, (%)	Actual Compliance Of Solar RPO, (MU)	Actual Compliance Of Non Solar RPO (%)	Actual Compliance Of Non Solar RPO, (MU)	Total Compliance, (%)	Total Compliance, (MU)	Category
8	9	10	11	12	13	14
4.91	3469.3	8.52	6015	13.43	9484.2	94.30%

Wind Power Policies

SN	Policy Parameters	Rajasthan
1	Policy Date & Link	
2	Tariff Order Date & Link	10th July 2017
3	Capital Cost (in lacs/MW)	525
4	Capacity Utilization Factor (CUF)	21%&20%
5	Feed in Tariff competitive Bidding in Rs./kWh	5.26/5.52. This price can also be considered as ceiling tariff for CB
6	Tariff if AD Availed	4.87/5.12
7	Tarif Period (in years)	25
8	APPC Rs./kWh	3.47

Wind Power Projects Commissioned (Developer Wise) as on 30.04.2017

S. No	Developer	Jaisalmer	Jodhpur	Sikar	Barmer	Chittorgarh /Pratapgarh	Total Capacity Commissioned
1	RREC-Own Plant	45.4	2.1			2.25	49.75
2	Suzlon	1608.95	315.5		9.6		1934.05
3	Enercon+ Vish	896.77	98.4	7.2			1002.37
4	NEPC					0.675	0.675
5	RRB Energy	25.8					25.8
6	Veer	76.5					76.5
7	Regen					211.5	211.5
8	INOX	554					554
9	Welspun					126	126
10	Gamesa				40		40
11	Nidhi	62.9					62.9
12	Tanot	120					120
13	Rajgarh	74					74
14	Shaktikrupa					7.5	7.5
15	Sampada					7.5	7.5
	Total	3464.32	416	7.2	49.6	355.425	4292.545

Major Wind Farms in Rajasthan

Power plant	Producer	Location	MW
Dangiri Wind Farm	Oil India Ltd.	Jaisalmer	54
Jaisalmer Wind Park	Suzlon Energy	Jaisalmer	1064
Inox Wind Park GSS	Inox	Amersar	

Electricity Generation, Transmission and Distribution Companies

Rajasthan Raja Vidyut Utpadan Nigam Limited

Corporate Office :Vidyut Bhawan, Jyoti Nagar, Janpath, Jaipur -302005

Website: <http://www.rvunl.com/>

Rajasthan Raja Vidyut Prasaran Nigam Limited

Corporate Office : Vidyut Bhawan, Janpath, Jaipur - 302 005

PABX 0141-2740381

Website: <http://www.rvpn.co.in/>

Jaipur Vidyut Vitran Nigam Ltd

Corporate Office : Vidyut Bhawan, Janpath, Jaipur - 302 005.

Website : <http://www.jaipurdiscom.com/>

Ajmer Vidyut Vitaran Nigam Ltd.

Corporate Office :Vidyut Bhawan, Panchsheel Nagar, Makarwali Road,

Ajmer-305004

Website : www.avvnl.com

Jodhpur Vidyut Vitaran Nigam Ltd.

Corporate Office: New Power House, Industrial Area, Jodhpur, Rajasthan 342003

Website: <http://www.jdvvn.com/>

Northern Regional Load Despatch Centre

18-A, Qutab Institutional Area, Katwaria Sarai, NEW DELHI – 110016 Fax : 011-26852747, 26853082, email: nrlcdc@vsnl.com, EPABX : 26854861, 26851754, 26854015, 26569504

Rajasthan State Load Despatch Centre

Office Address: New SLDC Building, Heerapura, Jaipur - 302024
Website: www.rvpl.co.in

State Energy Agencies and Addresses

Rajasthan Electricity Regulatory Commission (RERC)

Vidyut Viniyamak Bhawan,
(Near State Motor Garage) Sahakar Marg,
Jaipur – 302 001.
Phone: 0141-2741181/2741016
E-mail : recjpr@yahoo.co.in
Website: www.erc.gov.in

Secretary (Energy)

Office Address: Room No. 8340, SSO Building
Government Secretariat, Jaipur, Rajasthan
Website: <http://energy.rajasthan.gov.in/>

Rajasthan Renewable Energy Corporation Limited

(Incorporating formerly REDA and RSPCL)
E-166, Yudhishtir Marg, C-Scheme, Jaipur-302005
Phone Nos: 91-141-2225859
Website: Web site: www.rrecl.com



